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34506104.ST25.txt

SEQUENCE LISTING

<110> Niles, Andrew
Maffitt, Mark
Haak-Frendscho, Mary

<120> RECOMBINANT PROTEOLYTIC TRYPTASES, ACTIVE SITE MUTANTS THEREOF, AND METHODS OF MAKING SAME

<130> 34506.104

<140> 09/598,982

<141> 2000-06-21

<150> 09/079,970

<151> 1998-04-15

<160> 52

<170> PatentIn version 3.1

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Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
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ctc atc cac ccc cag tgg gtg ctg acc gca gcg cac tgc gtg gga ccg 144
Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro
35 40 45

gac gtc aag gat ctg gcc gcc ctc agg gtg caa ctg cgg gag cag cac 192
Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
50 55 60

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Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
65 70 75 80

cca cag ttc tac acc gcc cag atc gga gcg gac atc gcc ctg ctg gag 288
Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu
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Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
50 55 60

Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
65 70 75 80

Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu
85 90 95

Leu Glu Glu Pro Val Asn Val Ser Ser His Val His Thr Val Thr Leu
100 105 110

Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
115 120 125

Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro
130 135 140

Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
145 150 155 160

Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
165 170 175

Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
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Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
195 200 205

Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
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Val Pro Lys Lys Pro
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 Lys Trp Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met
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cac ttc tgc ggg ggc tcc ctc atc cac ccc cag tgg gtg ctg acc gca 144
 His Phe Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala
 35 40 45

gcg cac tgc gtg gga ccg gac gtc aag gat ctg gcc gcc ctc agg gtg 192
 Ala His Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val
 50 55 60

caa ctg cgg gag cag cac ctc tac tac cag gac cag ctg ctg ccg gtc 240
 Gln Leu Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val
 65 70 75

agc agg atc atc gtg cac cca cag ttc tac acc gcc cag atc gga gcg 288
 Ser Arg Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala
 80 85 90

gac atc gcc ctg ctg gag ctg gag gag ccg gtg aac gtc tcc agc cac 336
 Asp Ile Ala Leu Leu Glu Leu Glu Glu Pro Val Asn Val Ser Ser His
 95 100 105 110

gtc cac acg gtc acc ctg ccc cct gcc tca gag acc ttc ccc ccg ggg 384
 Val His Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly

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Asn	His	Ile	Cys	Asp	Ala	Lys	Tyr	His	Leu	Gly	Ala	Tyr	Thr	Gly	Asp					
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gac	gtc	cgc	atc	gtc	cgt	gac	gac	atg	ctg	tgt	gcc	ggg	aac	acc	cgc	576				
Asp	Val	Arg	Ile	Val	Arg	Asp	Asp	Met	Leu	Cys	Ala	Gly	Asn	Thr	Arg					
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agg	gac	tca	tgc	cag	ggc	gac	tcc	gga	ggg	ccc	ctg	gtg	tgc	aag	gtg	624				
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aat	ggc	acc	tgg	ctg	cag	gcg	ggc	gtg	gtc	agc	tgg	ggc	gag	ggc	tgt	672				
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Cys	Val	Gly	Pro	Asp	Val	Lys	Asp	Leu	Ala	Ala	Leu	Arg	Val	Gln	Leu
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Arg	Glu	Gln	His	Leu	Tyr	Tyr	Gln	Asp	Gln	Leu	Leu	Pro	Val	Ser	Arg
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65

70

75

80

Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile
85 90 95

Ala Leu Leu Glu Leu Glu Glu Pro Val Asn Val Ser Ser His Val His
100 105 110

Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro
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Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro
130 135 140

Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His
145 150 155 160

Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val
165 170 175

Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp
180 185 190

Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly
195 200 205

Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln
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      210                      215                      220

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Ala Gln Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu
      225                      230                      235

gac tgg atc cac cac tat gtc ccc aaa aag ccg tgaagcggcc gccgtcgt      771
Asp Trp Ile His His Tyr Val Pro Lys Lys Pro
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Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His
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Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu
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Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile
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34506104.ST25.txt

Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His
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Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val
165 170 175

Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp
180 185 190

Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly
195 200 205

Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln
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Ile His His Tyr Val Pro Lys Lys Pro
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agc ctg aga gtc cac ggc cca tac tgg atg cac ttc tgc ggg ggc tcc 96
Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
20 25 30

ctc atc cac ccc cag tgg gtg ctg acc gca gcg cac tgc gtg gga ccg 144
Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro
35 40 45

gac gtc aag gat ctg gcc gcc ctc agg gtg caa ctg cgg gag cag cac 192
Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
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ctc tac tac cag gac cag ctg ctg ccg gtc agc agg atc atc gtg cac 240

34506104.ST25.txt

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Ala	Gly	Val	Val	Ser	Trp	Gly	Glu	Gly	Cys	Ala	Gln	Pro	Asn	Arg	Pro	
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Gly	Ile	Tyr	Thr	Arg	Val	Thr	Tyr	Tyr	Leu	Asp	Trp	Ile	His	His	Tyr	
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Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu
 85 90 95

Leu Glu Glu Pro Val Lys Val Ser Ser His Val His Thr Val Thr Leu
 100 105 110

Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
 115 120 125

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Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
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Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
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Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
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Val Pro Lys Lys Pro
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 Lys Trp Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met
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34506104.ST25.txt

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			50					55					60				
caa	ctg	cgg	gag	cag	cac	ctc	tac	tac	cag	gac	cag	ctg	ctg	ccg	gtc	240	
Gln	Leu	Arg	Glu	Gln	His	Leu	Tyr	Tyr	Gln	Asp	Gln	Leu	Leu	Pro	Val		
		65					70					75					
agc	agg	atc	atc	gtg	cac	cca	cag	ttc	tac	acc	gcc	cag	atc	gga	gcg	288	
Ser	Arg	Ile	Ile	Val	His	Pro	Gln	Phe	Tyr	Thr	Ala	Gln	Ile	Gly	Ala		
	80					85					90						
gac	atc	gcc	ctg	ctg	gag	ctg	gag	gag	ccg	gtg	aag	gtc	tcc	agc	cac	336	
Asp	Ile	Ala	Leu	Leu	Glu	Leu	Glu	Glu	Pro	Val	Lys	Val	Ser	Ser	His		
95					100				105						110		
gtc	cac	acg	gtc	acc	ctg	ccc	cct	gcc	tca	gag	acc	ttc	ccc	ccg	ggg	384	
Val	His	Thr	Val	Thr	Leu	Pro	Pro	Ala	Ser	Glu	Thr	Phe	Pro	Pro	Gly		
				115				120						125			
atg	ccg	tgc	tgg	gtc	act	ggc	tgg	ggc	gat	gtg	gac	aat	gat	gag	cgc	432	
Met	Pro	Cys	Trp	Val	Thr	Gly	Trp	Gly	Asp	Val	Asp	Asn	Asp	Glu	Arg		
			130					135					140				
ctc	cca	ccg	cca	ttt	cct	ctg	aag	cag	gtg	aag	gtc	ccc	ata	atg	gaa	480	
Leu	Pro	Pro	Pro	Phe	Pro	Leu	Lys	Gln	Val	Lys	Val	Pro	Ile	Met	Glu		
		145					150					155					
aac	cac	att	tgt	gac	gca	aaa	tac	cac	ctt	ggc	gcc	tac	acg	gga	gac	528	
Asn	His	Ile	Cys	Asp	Ala	Lys	Tyr	His	Leu	Gly	Ala	Tyr	Thr	Gly	Asp		
	160					165					170						
gac	gtc	cgc	atc	gtc	cgt	gac	gac	atg	ctg	tgt	gcc	ggg	aac	acc	cgg	576	
Asp	Val	Arg	Ile	Val	Arg	Asp	Asp	Met	Leu	Cys	Ala	Gly	Asn	Thr	Arg		
175					180				185						190		
agg	gac	tca	tgc	cag	ggc	gac	tcc	gga	ggg	ccc	ctg	gtg	tgc	aag	gtg	624	
Arg	Asp	Ser	Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Leu	Val	Cys	Lys	Val		
				195				200					205				
aat	ggc	acc	tgg	ctg	cag	gcg	ggc	gtg	gtc	agc	tgg	ggc	gag	ggc	tgt	672	
Asn	Gly	Thr	Trp	Leu	Gln	Ala	Gly	Val	Val	Ser	Trp	Gly	Glu	Gly	Cys		
			210					215					220				
gcc	cag	ccc	aac	cgg	cct	ggc	atc	tac	acc	cgt	gtc	acc	tac	tac	ttg	720	
Ala	Gln	Pro	Asn	Arg	Pro	Gly	Ile	Tyr	Thr	Arg	Val	Thr	Tyr	Tyr	Leu		
		225					230					235					
gac	tgg	atc	cac	cac	tat	gtc	ccc	aaa	aag	ccg	tgaagcggcc	gccgtcgt				771	
Asp	Trp	Ile	His	His	Tyr	Val	Pro	Lys	Lys	Pro							
	240					245											

<210> 21
 <211> 249
 <212> PRT

<213> Homo sapiens

<400> 21

Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp
 1 5 10 15

Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe
 20 25 30

Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala Ala
 35 40 45

Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu
 50 55 60

Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg
 65 70 75 80

Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile
 85 90 95

Ala Leu Leu Glu Leu Glu Glu Pro Val Lys Val Ser Ser His Val His
 100 105 110

Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro
 115 120 125

Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro
 130 135 140

Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His
 145 150 155 160

Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val
 165 170 175

Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp
 180 185 190

Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly
 195 200 205

Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln
 210 215 220

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Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp
 225 230 235 240

Ile His His Tyr Val Pro Lys Lys Pro
 245

<210> 22
 <211> 771
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (7)..(753)
 <223>

<400> 22
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 Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser
 1 5 10

aag tgg ccc tgg cag gtg agc ctg aga gtc cac ggc cca tac tgg atg 96
 Lys Trp Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met
 15 20 25 30

cac ttc tgc ggg ggc tcc ctc atc cac ccc cag tgg gtg ctg acc gca 144
 His Phe Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala
 35 40 45

gcg cac tgc gtg gga ccg gac gtc aag gat ctg gcc gcc ctc agg gtg 192
 Ala His Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val
 50 55 60

caa ctg cgg gag cag cac ctc tac tac cag gac cag ctg ctg ccg gtc 240
 Gln Leu Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val
 65 70 75

agc agg atc atc gtg cac cca cag ttc tac acc gcc cag atc gga gcg 288
 Ser Arg Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala
 80 85 90

gca atc gcc ctg ctg gag ctg gag gag ccg gtg aag gtc tcc agc cac 336
 Ala Ile Ala Leu Leu Glu Leu Glu Glu Pro Val Lys Val Ser Ser His
 95 100 105 110

gtc cac acg gtc acc ctg ccc cct gcc tca gag acc ttc ccc ccg ggg 384
 Val His Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly
 115 120 125

atg ccg tgc tgg gtc act ggc tgg ggc gat gtg gac aat gat gag cgc 432
 Met Pro Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg
 130 135 140

ctc cca ccg cca ttt cct ctg aag cag gtg aag gtc ccc ata atg gaa 480
 Leu Pro Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu

145

150

155

aac cac att tgt gac gca aaa tac cac ctt ggc gcc tac acg gga gac 528
 Asn His Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp
 160 165 170

gac gtc cgc atc gtc cgt gac gac atg ctg tgt gcc ggg aac acc cgg 576
 Asp Val Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg
 175 180 185 190

agg gac tca tgc cag ggc gac tcc gga ggg ccc ctg gtg tgc aag gtg 624
 Arg Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Val
 195 200 205

aat ggc acc tgg ctg cag gcg ggc gtg gtc agc tgg ggc gag ggc tgt 672
 Asn Gly Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys
 210 215 220

gcc cag ccc aac cgg cct ggc atc tac acc cgt gtc acc tac tac ttg 720
 Ala Gln Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu
 225 230 235

gac tgg atc cac cac tat gtc ccc aaa aag ccg tgaagcggcc gccgtcgt 771
 Asp Trp Ile His His Tyr Val Pro Lys Lys Pro
 240 245

<210> 23

<211> 249

<212> PRT

<213> Homo sapiens

<400> 23

Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp
 1 5 10 15

Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe
 20 25 30

Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His
 35 40 45

Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu
 50 55 60

Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg
 65 70 75 80

Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Ala Ile
 85 90 95

Ala Leu Leu Glu Leu Glu Glu Pro Val Lys Val Ser Ser His Val His

100

105

110

Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro
 115 120 125

Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro
 130 135 140

Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His
 145 150 155 160

Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val
 165 170 175

Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp
 180 185 190

Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly
 195 200 205

Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln
 210 215 220

Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp
 225 230 235 240

Ile His His Tyr Val Pro Lys Lys Pro
 245

<210> 24
 <211> 771
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (7)..(753)
 <223>

<400> 24
 gggccc ctc gag aaa aga atc gtc ggg ggt cag gag gcc ccc agg agc 48
 Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser
 1 5 10

aag tgg ccc tgg cag gtg agc ctg aga gtc cac ggc cca tac tgg atg 96
 Lys Trp Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met
 15 20 25 30

100

105

110

Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro
 115 120 125

Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro
 130 135 140

Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His
 145 150 155 160

Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val
 165 170 175

Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp
 180 185 190

Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly
 195 200 205

Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln
 210 215 220

Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp
 225 230 235 240

Ile His His Tyr Val Pro Lys Lys Pro
 245

<210> 24
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 <212> DNA
 <213> Homo sapiens

<220>
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 <222> (7)..(753)
 <223>

<400> 24
 gggccc ctc gag aaa aga atc gtc ggg ggt cag gag gcc ccc agg agc 48
 Leu Glu Lys Arg Ile Val Gly Gly Gln Ala Pro Arg Ser
 1 5 10

aag tgg ccc tgg cag gtg agc ctg aga gtc cac ggc cca tac tgg atg 96
 Lys Trp Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met
 15 20 25 30

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cac ttc tgc ggg ggc tcc ctc atc cac ccc cag tgg gtg ctg acc gca His Phe Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala 35 40 45	144
gcg cac tgc gtg gga ccg gac gtc aag gat ctg gcc gcc ctc agg gtg Ala His Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val 50 55 60	192
caa ctg cgg gag cag cac ctc tac tac cag gac cag ctg ctg ccg gtc Gln Leu Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val 65 70 75	240
agc agg atc atc gtg cac cca cag ttc tac acc gcc cag atc gga gcg Ser Arg Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala 80 85 90	288
gac atc gcc ctg ctg gag ctg gag gag ccg gtg aag gtc tcc agc cac Asp Ile Ala Leu Leu Glu Leu Glu Glu Pro Val Lys Val Ser Ser His 95 100 105 110	336
gtc cac acg gtc acc ctg ccc cct gcc tca gag acc ttc ccc ccg ggg Val His Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly 115 120 125	384
atg ccg tgc tgg gtc act ggc tgg ggc gat gtg gac aat gat gag cgc Met Pro Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg 130 135 140	432
ctc cca ccg cca ttt cct ctg aag cag gtg aag gtc ccc ata atg gaa Leu Pro Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu 145 150 155	480
aac cac att tgt gac gca aaa tac cac ctt ggc gcc tac acg gga gac Asn His Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp 160 165 170	528
gac gtc cgc atc gtc cgt gac gac atg ctg tgt gcc ggg aac acc ccg Asp Val Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg 175 180 185 190	576
agg gac tca tgt caa ggc gac gcc ggc gga cct ctg gtg tgc aag gtg Arg Asp Ser Cys Gln Gly Asp Ala Gly Gly Pro Leu Val Cys Lys Val 195 200 205	624
aat ggc acc tgg ctg cag gcg ggc gtg gtc agc tgg ggc gag ggc tgt Asn Gly Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys 210 215 220	672
gcc cag ccc aac ccg cct ggc atc tac acc cgt gtc acc tac tac ttg Ala Gln Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu 225 230 235	720
gac tgg atc cac cac tat gtc ccc aaa aag ccg tgaagcggcc gccgtcgt Asp Trp Ile His His Tyr Val Pro Lys Lys Pro 240 245	771

<210> 25

<211> 249

<212> PRT

<213> Homo sapiens

<400> 25

Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp
 1 5 10 15

Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe
 20 25 30

Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His
 35 40 45

Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu
 50 55 60

Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg
 65 70 75 80

Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile
 85 90 95

Ala Leu Leu Glu Leu Glu Glu Pro Val Lys Val Ser Ser His Val His
 100 105 110

Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro
 115 120 125

Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro
 130 135 140

Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His
 145 150 155 160

Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val
 165 170 175

Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp
 180 185 190

Ser Cys Gln Gly Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly
 195 200 205

Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln
 210 215 220

Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp
 225 230 235 240

Ile His His Tyr Val Pro Lys Lys Pro
 245

<210> 26
 <211> 771
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (7)..(753)
 <223>

<400> 26
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 Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser
 1 5 10
 aag tgg ccc tgg cag gtg agc ctg aga gtc cac ggc cca tac tgg atg 96
 Lys Trp Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met
 15 20 25 30
 cac ttc tgc ggg ggc tcc ctc atc cac ccc cag tgg gtg ctg acc gca 144
 His Phe Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala
 35 40 45
 gcg cac tgc gtg gga ccg gac gtc aag gat ctg gcc gcc ctc agg gtg 192
 Ala His Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val
 50 55 60
 caa ctg cgg gag cag cac ctc tac tac cag gac cag ctg ctg ccg gtc 240
 Gln Leu Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val
 65 70 75
 agc agg atc atc gtg cac cca cag ttc tac acc gcc cag atc gga gcg 288
 Ser Arg Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala
 80 85 90
 gac atc gcc ctg ctg gag ctg gag gag ccg gtg aag gtc tcc agc cac 336
 Asp Ile Ala Leu Leu Glu Leu Glu Glu Pro Val Lys Val Ser Ser His
 95 100 105 110
 gtc cac acg gtc acc ctg ccc cct gcc tca gag acc ttc ccc ccg ggg 384
 Val His Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly
 115 120 125
 atg ccg tgc tgg gtc act ggc tgg ggc gat gtg gac aat gat gag cgc 432
 Met Pro Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg
 130 135 140
 ctc cca ccg cca ttt cct ctg aag cag gtg aag gtc ccc ata atg gaa 480

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Leu Pro Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu
 145 150 155
 aac cac att tgt gac gca aaa tac cac ctt ggc gcc tac acg gga gac 528
 Asn His Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp
 160 165 170
 gac gtc cgc atc gtc cgt gac gac atg ctg tgt gcc ggg aac acc cgg 576
 Asp Val Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg
 175 180 185 190
 agg gac tca tgc caa gga gac gcc ggc gga cca ctg gtg tgc aag gtg 624
 Arg Asp Ser Cys Gln Gly Asp Ala Gly Gly Pro Leu Val Cys Lys Val
 195 200 205
 aat ggc acc tgg ctg cag gcg ggc gtg gtc agc tgg ggc gag ggc tgt 672
 Asn Gly Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys
 210 215 220
 gcc cag ccc aac cgg cct ggc atc tac acc cgt gtc acc tac tac ttg 720
 Ala Gln Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu
 225 230 235
 gac tgg atc cac cac tat gtc ccc aaa aag ccg tgaagcggcc gccgtcgt 771
 Asp Trp Ile His His Tyr Val Pro Lys Lys Pro
 240 245

<210> 27
 <211> 249
 <212> PRT
 <213> Homo sapiens

<400> 27

Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp
 1 5 10 15

Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe
 20 25 30

Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His
 35 40 45

Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu
 50 55 60

Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg
 65 70 75 80

Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile
 85 90 95

34506104.ST25.txt

Ala Leu Leu Glu Leu Glu Glu Pro Val Lys Val Ser Ser His Val His
100 105 110

Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro
115 120 125

Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro
130 135 140

Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His
145 150 155 160

Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val
165 170 175

Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp
180 185 190

Ser Cys Gln Gly Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly
195 200 205

Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln
210 215 220

Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp
225 230 235 240

Ile His His Tyr Val Pro Lys Lys Pro
245

<210> 28
<211> 735
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(735)
<223>

<400> 28
atc gtc ggg ggt cag gag gcc ccc agg agc aag tgg ccc tgg cag gtg 48
Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp Pro Trp Gln Val
1 5 10 15

agc ctg aga gtc cac ggc cca tac tgg atg cac ttc tgc ggg ggc tcc 96
Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
20 25 30

34506104.ST25.txt

ctc atc cac ccc cag tgg gtg ctg acc gcc gcg gcg tgc gtg gga ccg Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala Ala Cys Val Gly Pro 35 40 45	144
gac gtc aag gat ctg gcc gcc ctc agg gtg caa ctg cgg gag cag cac Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His 50 55 60	192
ctc tac tac cag gac cag ctg ctg ccg gtc agc agg atc atc gtg cac Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His 65 70 75 80	240
cca cag ttc tac acc gcc cag atc gga gcg gac atc gcc ctg ctg gag Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu 85 90 95	288
ctg gag gag ccg gtg aag gtc tcc agc cac gtc cac acg gtc acc ctg Leu Glu Glu Pro Val Lys Val Ser Ser His Val His Thr Val Thr Leu 100 105 110	336
ccc cct gcc tca gag acc ttc ccc ccg ggg atg ccg tgc tgg gtc act Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr 115 120 125	384
ggc tgg ggc gat gtg gac aat gat gag cgc ctc cca ccg cca ttt cct Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro 130 135 140	432
ctg aag cag gtg aag gtc ccc ata atg gaa aac cac att tgt gac gca Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala 145 150 155 160	480
aaa tac cac ctt ggc gcc tac acg gga gac gac gtc cgc atc gtc cgt Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg 165 170 175	528
gac gac atg ctg tgt gcc ggg aac acc ccg agg gac tca tgc cag ggc Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly 180 185 190	576
gac tcc gga ggg ccc ctg gtg tgc aag gtg aat ggc acc tgg ctg cag Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln 195 200 205	624
gcg ggc gtg gtc agc tgg ggc gag ggc tgt gcc cag ccc aac ccg cct Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro 210 215 220	672
ggc atc tac acc cgt gtc acc tac tac ttg gac tgg atc cac cac tat Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr 225 230 235 240	720
gtc ccc aaa aag ccg Val Pro Lys Lys Pro 245	735

<211> 245
 <212> PRT
 <213> Homo sapiens

<400> 29

Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp Pro Trp Gln Val
 1 5 10 15

Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
 20 25 30

Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala Ala Cys Val Gly Pro
 35 40 45

Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
 50 55 60

Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
 65 70 75 80

Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu
 85 90 95

Leu Glu Glu Pro Val Lys Val Ser Ser His Val His Thr Val Thr Leu
 100 105 110

Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
 115 120 125

Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Phe Pro
 130 135 140

Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
 145 150 155 160

Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
 165 170 175

Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
 180 185 190

Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
 195 200 205

Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro

210

215

220

Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
 225 230 235 240

Val Pro Lys Lys Pro
 245

<210> 30
 <211> 735
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)..(735)
 <223>

<400> 30
 atc gtc ggg ggt cag gag gcc ccc agg agc aag tgg ccc tgg cag gtg 48
 Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp Pro Trp Gln Val
 1 5 10 15
 agc ctg aga gtc cac ggc cca tac tgg atg cac ttc tgc ggg ggc tcc 96
 Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
 20 25 30
 ctc atc cac ccc cag tgg gtg ctg acc gca gcg cac tgc gtg gga ccg 144
 Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro
 35 40 45
 gac gtc aag gat ctg gcc gcc ctc agg gtg caa ctg cgg gag cag cac 192
 Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
 50 55 60
 ctc tac tac cag gac cag ctg ctg ccg gtc agc agg atc atc gtg cac 240
 Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
 65 70 75 80
 cca cag ttc tac acc gcc cag atc gga gcg gca atc gcc ctg ctg gag 288
 Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Ala Ile Ala Leu Leu Glu
 85 90 95
 ctg gag gag ccg gtg aag gtc tcc agc cac gtc cac acg gtc acc ctg 336
 Leu Glu Glu Pro Val Lys Val Ser Ser His Val His Thr Val Thr Leu
 100 105 110
 ccc cct gcc tca gag acc ttc ccc ccg ggg atg ccg tgc tgg gtc act 384
 Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
 115 120 125
 ggc tgg ggc gat gtg gac aat gat gag cgc ctc cca ccg cca ttt cct 432
 Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro
 130 135 140

34506104.ST25.txt

ctg aag cag gtg aag gtc ccc ata atg gaa aac cac att tgt gac gca 480
 Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
 145 150 155 160

aaa tac cac ctt ggc gcc tac acg gga gac gac gtc cgc atc gtc cgt 528
 Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
 165 170 175

gac gac atg ctg tgt gcc ggg aac acc cgg agg gac tca tgc cag ggc 576
 Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
 180 185 190

gac tcc gga ggg ccc ctg gtg tgc aag gtg aat ggc acc tgg ctg cag 624
 Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
 195 200 205

gcg ggc gtg gtc agc tgg ggc gag ggc tgt gcc cag ccc aac cgg cct 672
 Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
 210 215 220

ggc atc tac acc cgt gtc acc tac tac ttg gac tgg atc cac cac tat 720
 Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
 225 230 235 240

gtc ccc aaa aag ccg 735
 Val Pro Lys Lys Pro
 245

<210> 31
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 <212> PRT
 <213> Homo sapiens

<400> 31

Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp Pro Trp Gln Val
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Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
 20 25 30

Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro
 35 40 45

Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
 50 55 60

Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
 65 70 75 80

Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Ala Ile Ala Leu Leu Glu
 85 90 95

Leu Glu Glu Pro Val Lys Val Ser Ser His Val His Thr Val Thr Leu
 100 105 110

Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
 115 120 125

Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro
 130 135 140

Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
 145 150 155 160

Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
 165 170 175

Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
 180 185 190

Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
 195 200 205

Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
 210 215 220

Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
 225 230 235 240

Val Pro Lys Lys Pro
 245

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 Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser

20

25

30

ctc atc cac ccc cag tgg gtg ctg acc gca gcg cac tgc gtg gga ccg 144
 Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro
 35 40 45

gac gtc aag gat ctg gcc gcc ctc agg gtg caa ctg cgg gag cag cac 192
 Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
 50 55 60

ctc tac tac cag gac cag ctg ctg ccg gtc agc agg atc atc gtg cac 240
 Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
 65 70 75 80

cca cag ttc tac acc gcc cag atc gga gcg gac atc gcc ctg ctg gag 288
 Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu
 85 90 95

ctg gag gag ccg gtg aag gtc tcc agc cac gtc cac acg gtc acc ctg 336
 Leu Glu Glu Pro Val Lys Val Ser Ser His Val His Thr Val Thr Leu
 100 105 110

ccc cct gcc tca gag acc ttc ccc ccg ggg atg ccg tgc tgg gtc act 384
 Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
 115 120 125

ggc tgg ggc gat gtg gac aat gat gag cgc ctc cca ccg cca ttt cct 432
 Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro
 130 135 140

ctg aag cag gtg aag gtc ccc ata atg gaa aac cac att tgt gac gca 480
 Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
 145 150 155 160

aaa tac cac ctt ggc gcc tac acg gga gac gac gtc cgc atc gtc cgt 528
 Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
 165 170 175

gac gac atg ctg tgt gcc ggg aac acc ccg agg gac tca tgt caa ggc 576
 Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
 180 185 190

gac gcc ggc gga cct ctg gtg tgc aag gtg aat ggc acc tgg ctg cag 624
 Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
 195 200 205

gcg ggc gtg gtc agc tgg ggc gag ggc tgt gcc cag ccc aac ccg cct 672
 Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
 210 215 220

ggc atc tac acc cgt gtc acc tac tac ttg gac tgg atc cac cac tat 720
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gtc ccc aaa aag ccg 735
 Val Pro Lys Lys Pro
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<210> 33
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<400> 33

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Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
 20 25 30

Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro
 35 40 45

Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
 50 55 60

Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
 65 70 75 80

Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu
 85 90 95

Leu Glu Glu Pro Val Lys Val Ser Ser His Val His Thr Val Thr Leu
 100 105 110

Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
 115 120 125

Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro
 130 135 140

Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
 145 150 155 160

Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
 165 170 175

Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
 180 185 190

Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
 195 200 205

34506104.ST25.txt

Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
 210 215 220

Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
 225 230 235 240

Val Pro Lys Lys Pro
 245

<210> 34
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 Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
 20 25 30
 ctc atc cac ccc cag tgg gtg ctg acc gca gcg cac tgc gtg gga ccg 144
 Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro
 35 40 45
 gac gtc aag gat ctg gcc gcc ctc agg gtg caa ctg cgg gag cag cac 192
 Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
 50 55 60
 ctc tac tac cag gac cag ctg ctg ccg gtc agc agg atc atc gtg cac 240
 Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
 65 70 75 80
 cca cag ttc tac acc gcc cag atc gga gcg gac atc gcc ctg ctg gag 288
 Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu
 85 90 95
 ctg gag gag ccg gtg aag gtc tcc agc cac gtc cac acg gtc acc ctg 336
 Leu Glu Glu Pro Val Lys Val Ser Ser His Val His Thr Val Thr Leu
 100 105 110
 ccc cct gcc tca gag acc ttc ccc ccg ggg atg ccg tgc tgg gtc act 384
 Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
 115 120 125
 ggc tgg ggc gat gtg gac aat gat gag cgc ctc cca ccg cca ttt cct 432
 Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro
 130 135 140

34506104.ST25.txt

ctg aag cag gtg aag gtc ccc ata atg gaa aac cac att tgt gac gca 480
 Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
 145 150 155 160

aaa tac cac ctt ggc gcc tac acg gga gac gac gtc cgc atc gtc cgt 528
 Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
 165 170 175

gac gac atg ctg tgt gcc ggg aac acc cgg agg gac tca tgc caa gga 576
 Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
 180 185 190

gac gcc ggc gga cca ctg gtg tgc aag gtg aat ggc acc tgg ctg cag 624
 Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
 195 200 205

gcg ggc gtg gtc agc tgg ggc gag ggc tgt gcc cag ccc aac cgg cct 672
 Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
 210 215 220

ggc atc tac acc cgt gtc acc tac tac ttg gac tgg atc cac cac tat 720
 Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
 225 230 235 240

gtc ccc aaa aag ccg 735
 Val Pro Lys Lys Pro
 245

<210> 35
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<400> 35

Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp Pro Trp Gln Val
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Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
 20 25 30

Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro
 35 40 45

Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
 50 55 60

Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
 65 70 75 80

Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu
 85 90 95

Leu Glu Glu Pro Val Lys Val Ser Ser His Val His Thr Val Thr Leu
 100 105 110

Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
 115 120 125

Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro
 130 135 140

Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
 145 150 155 160

Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
 165 170 175

Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
 180 185 190

Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
 195 200 205

Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
 210 215 220

Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
 225 230 235 240

Val Pro Lys Lys Pro
 245

<210> 36
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<220>
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 1 5 10

aag tgg ccc tgg cag gtg agc ctg aga gtc cac ggc cca tac tgg atg 96

34506104.ST25.txt

Lys	Trp	Pro	Trp	Gln	Val	Ser	Leu	Arg	Val	His	Gly	Pro	Tyr	Trp	Met		
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cac	ttc	tgc	ggg	ggc	tcc	ctc	atc	cac	ccc	cag	tgg	gtg	ctg	acc	gcc	144	
His	Phe	Cys	Gly	Gly	Ser	Leu	Ile	His	Pro	Gln	Trp	Val	Leu	Thr	Ala		
			35						40					45			
gcg	gcg	tgc	gtg	gga	ccg	gac	gtc	aag	gat	ctg	gcc	gcc	ctc	agg	gtg	192	
Ala	Ala	Cys	Val	Gly	Pro	Asp	Val	Lys	Asp	Leu	Ala	Ala	Leu	Arg	Val		
			50					55					60				
caa	ctg	cgg	gag	cag	cac	ctc	tac	tac	cag	gac	cag	ctg	ctg	ccg	gtc	240	
Gln	Leu	Arg	Glu	Gln	His	Leu	Tyr	Tyr	Gln	Asp	Gln	Leu	Leu	Pro	Val		
		65					70					75					
agc	agg	atc	atc	gtg	cac	cca	cag	ttc	tac	acc	gcc	cag	atc	gga	gcg	288	
Ser	Arg	Ile	Ile	Val	His	Pro	Gln	Phe	Tyr	Thr	Ala	Gln	Ile	Gly	Ala		
	80					85					90						
gac	atc	gcc	ctg	ctg	gag	ctg	gag	gag	ccg	gtg	aac	gtc	tcc	agc	cac	336	
Asp	Ile	Ala	Leu	Leu	Glu	Leu	Glu	Glu	Pro	Val	Asn	Val	Ser	Ser	His		
	95				100					105					110		
gtc	cac	acg	gtc	acc	ctg	ccc	cct	gcc	tca	gag	acc	ttc	ccc	ccg	ggg	384	
Val	His	Thr	Val	Thr	Leu	Pro	Pro	Ala	Ser	Glu	Thr	Phe	Pro	Pro	Gly		
				115				120						125			
atg	ccg	tgc	tgg	gtc	act	ggc	tgg	ggc	gat	gtg	gac	aat	gat	gag	cgc	432	
Met	Pro	Cys	Trp	Val	Thr	Gly	Trp	Gly	Asp	Val	Asp	Asn	Asp	Glu	Arg		
			130					135					140				
ctc	cca	ccg	cca	ttt	cct	ctg	aag	cag	gtg	aag	gtc	ccc	ata	atg	gaa	480	
Leu	Pro	Pro	Pro	Phe	Pro	Leu	Lys	Gln	Val	Lys	Val	Pro	Ile	Met	Glu		
			145				150					155					
aac	cac	att	tgt	gac	gca	aaa	tac	cac	ctt	ggc	gcc	tac	acg	gga	gac	528	
Asn	His	Ile	Cys	Asp	Ala	Lys	Tyr	His	Leu	Gly	Ala	Tyr	Thr	Gly	Asp		
	160					165					170						
gac	gtc	cgc	atc	gtc	cgt	gac	gac	atg	ctg	tgt	gcc	ggg	aac	acc	cgg	576	
Asp	Val	Arg	Ile	Val	Arg	Asp	Asp	Met	Leu	Cys	Ala	Gly	Asn	Thr	Arg		
	175				180					185					190		
agg	gac	tca	tgc	cag	ggc	gac	tcc	gga	ggg	ccc	ctg	gtg	tgc	aag	gtg	624	
Arg	Asp	Ser	Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Leu	Val	Cys	Lys	Val		
				195				200						205			
aat	ggc	acc	tgg	ctg	cag	gcg	ggc	gtg	gtc	agc	tgg	ggc	gag	ggc	tgt	672	
Asn	Gly	Thr	Trp	Leu	Gln	Ala	Gly	Val	Val	Ser	Trp	Gly	Glu	Gly	Cys		
			210					215					220				
gcc	cag	ccc	aac	cgg	cct	ggc	atc	tac	acc	cgt	gtc	acc	tac	tac	ttg	720	
Ala	Gln	Pro	Asn	Arg	Pro	Gly	Ile	Tyr	Thr	Arg	Val	Thr	Tyr	Tyr	Leu		
		225					230					235					
gac	tgg	atc	cac	cac	tat	gtc	ccc	aaa	aag	ccg	tgaagcggcc	gccgctcgt				771	
Asp	Trp	Ile	His	His	Tyr	Val	Pro	Lys	Lys	Pro							
	240					245											

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 <212> PRT
 <213> Homo sapiens

<400> 37

Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp
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Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe
 20 25 30

Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala Ala
 35 40 45

Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu
 50 55 60

Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg
 65 70 75 80

Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile
 85 90 95

Ala Leu Leu Glu Leu Glu Glu Pro Val Asn Val Ser Ser His Val His
 100 105 110

Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro
 115 120 125

Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro
 130 135 140

Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His
 145 150 155 160

Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val
 165 170 175

Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp
 180 185 190

Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly
 195 200 205

Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln
210 215 220

Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp
225 230 235 240

Ile His His Tyr Val Pro Lys Lys Pro
245

<210> 38
<211> 771
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Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser
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aag tgg ccc tgg cag gtg agc ctg aga gtc cac ggc cca tac tgg atg 96
Lys Trp Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met
15 20 25 30

cac ttc tgc ggg ggc tcc ctc atc cac ccc cag tgg gtg ctg acc gca 144
His Phe Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala
35 40 45

gcg cac tgc gtg gga ccg gac gtc aag gat ctg gcc gcc ctc agg gtg 192
Ala His Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val
50 55 60

caa ctg cgg gag cag cac ctc tac tac cag gac cag ctg ctg ccg gtc 240
Gln Leu Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val
65 70 75

agc agg atc atc gtg cac cca cag ttc tac acc gcc cag atc gga gcg 288
Ser Arg Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala
80 85 90

gca atc gcc ctg ctg gag ctg gag gag ccg gtg aac gtc tcc agc cac 336
Ala Ile Ala Leu Leu Glu Leu Glu Glu Pro Val Asn Val Ser Ser His
95 100 105 110

gtc cac acg gtc acc ctg ccc cct gcc tca gag acc ttc ccc ccg ggg 384
Val His Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly
115 120 125

atg ccg tgc tgg gtc act ggc tgg ggc gat gtg gac aat gat gag cgc 432
Met Pro Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg

130	135	140	
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aac cac att tgt gac gca aaa tac cac ctt ggc gcc tac acg gga gac Asn His Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp 160 165 170			528
gac gtc cgc atc gtc cgt gac gac atg ctg tgt gcc ggg aac acc cgg Asp Val Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg 175 180 185 190			576
agg gac tca tgc cag ggc gac tcc gga ggg ccc ctg gtg tgc aag gtg Arg Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Val 195 200 205			624
aat ggc acc tgg ctg cag gcg ggc gtg gtc agc tgg ggc gag ggc tgt Asn Gly Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys 210 215 220			672
gcc cag ccc aac cgg cct ggc atc tac acc cgt gtc acc tac tac ttg Ala Gln Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu 225 230 235			720
gac tgg atc cac cac tat gtc ccc aaa aag ccg tgaagcggcc gccgtcgt Asp Trp Ile His His Tyr Val Pro Lys Lys Pro 240 245			771

<210> 39
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 <212> PRT
 <213> Homo sapiens

<400> 39

Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp
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Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe
 20 25 30

Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His
 35 40 45

Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu
 50 55 60

Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg
 65 70 75 80

Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Ala Ile

Ala Leu Leu Glu Leu Glu Glu Pro Val Asn Val Ser Ser His Val His
 100 105 110

Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro
 115 120 125

Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro
 130 135 140

Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His
 145 150 155 160

Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val
 165 170 175

Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp
 180 185 190

Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly
 195 200 205

Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln
 210 215 220

Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp
 225 230 235 240

Ile His His Tyr Val Pro Lys Lys Pro
 245

<210> 40
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<220>
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 Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser
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34506104.ST25.txt

aag tgg ccc tgg cag gtg agc ctg aga gtc cac ggc cca tac tgg atg 96
Lys Trp Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met
15 20 25 30

cac ttc tgc ggg ggc tcc ctc atc cac ccc cag tgg gtg ctg acc gca 144
His Phe Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala
35 40 45

gcg cac tgc gtg gga ccg gac gtc aag gat ctg gcc gcc ctc agg gtg 192
Ala His Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val
50 55 60

caa ctg cgg gag cag cac ctc tac tac cag gac cag ctg ctg ccg gtc 240
Gln Leu Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val
65 70 75

agc agg atc atc gtg cac cca cag ttc tac acc gcc cag atc gga gcg 288
Ser Arg Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala
80 85 90

gac atc gcc ctg ctg gag ctg gag gag ccg gtg aac gtc tcc agc cac 336
Asp Ile Ala Leu Leu Glu Leu Glu Glu Pro Val Asn Val Ser Ser His
95 100 105 110

gtc cac acg gtc acc ctg ccc cct gcc tca gag acc ttc ccc ccg ggg 384
Val His Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly
115 120 125

atg ccg tgc tgg gtc act ggc tgg ggc gat gtg gac aat gat gag cgc 432
Met Pro Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg
130 135 140

ctc cca ccg cca ttt cct ctg aag cag gtg aag gtc ccc ata atg gaa 480
Leu Pro Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu
145 150 155

aac cac att tgt gac gca aaa tac cac ctt ggc gcc tac acg gga gac 528
Asn His Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp
160 165 170

gac gtc cgc atc gtc cgt gac gac atg ctg tgt gcc ggg aac acc ccg 576
Asp Val Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg
175 180 185 190

agg gac tca tgt caa ggc gac gcc ggc gga cct ctg gtg tgc aag gtg 624
Arg Asp Ser Cys Gln Gly Asp Ala Gly Gly Pro Leu Val Cys Lys Val
195 200 205

aat ggc acc tgg ctg cag gcg ggc gtg gtc agc tgg ggc gag ggc tgt 672
Asn Gly Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys
210 215 220

gcc cag ccc aac ccg cct ggc atc tac acc cgt gtc acc tac tac ttg 720
Ala Gln Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu
225 230 235

gac tgg atc cac cac tat gtc ccc aaa aag ccg tgaagcggcc gccgtcgt 771
Asp Trp Ile His His Tyr Val Pro Lys Lys Pro
240 245

<210> 41
 <211> 249
 <212> PRT
 <213> Homo sapiens

<400> 41

Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp
 1 5 10 15

Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe
 20 25 30

Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His
 35 40 45

Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu
 50 55 60

Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg
 65 70 75 80

Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile
 85 90 95

Ala Leu Leu Glu Leu Glu Glu Pro Val Asn Val Ser Ser His Val His
 100 105 110

Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro
 115 120 125

Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro
 130 135 140

Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His
 145 150 155 160

Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val
 165 170 175

Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp
 180 185 190

Ser Cys Gln Gly Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly
 195 200 205

Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln
 210 215 220

Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp
 225 230 235 240

Ile His His Tyr Val Pro Lys Lys Pro
 245

<210> 42
 <211> 771
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (7)..(753)
 <223>

<400> 42
 gggccc ctc gag aaa aga atc gtc ggg ggt cag gag gcc ccc agg agc 48
 Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser
 1 5 10

aag tgg ccc tgg cag gtg agc ctg aga gtc cac ggc cca tac tgg atg 96
 Lys Trp Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met
 15 20 25 30

cac ttc tgc ggg ggc tcc ctc atc cac ccc cag tgg gtg ctg acc gca 144
 His Phe Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala
 35 40 45

gcg cac tgc gtg gga ccg gac gtc aag gat ctg gcc gcc ctc agg gtg 192
 Ala His Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val
 50 55 60

caa ctg cgg gag cag cac ctc tac tac cag gac cag ctg ctg ccg gtc 240
 Gln Leu Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val
 65 70 75

agc agg atc atc gtg cac cca cag ttc tac acc gcc cag atc gga gcg 288
 Ser Arg Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala
 80 85 90

gac atc gcc ctg ctg gag ctg gag gag ccg gtg aac gtc tcc agc cac 336
 Asp Ile Ala Leu Leu Glu Leu Glu Glu Pro Val Asn Val Ser Ser His
 95 100 105 110

gtc cac acg gtc acc ctg ccc cct gcc tca gag acc ttc ccc ccg ggg 384
 Val His Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly
 115 120 125

atg ccg tgc tgg gtc act ggc tgg ggc gat gtg gac aat gat gag cgc 432

34506104.ST25.txt

Met Pro Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg
130 135 140

ctc cca ccg cca ttt cct ctg aag cag gtg aag gtc ccc ata atg gaa 480
Leu Pro Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu
145 150 155

aac cac att tgt gac gca aaa tac cac ctt ggc gcc tac acg gga gac 528
Asn His Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp
160 165 170

gac gtc cgc atc gtc cgt gac gac atg ctg tgt gcc ggg aac acc cgg 576
Asp Val Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg
175 180 185 190

agg gac tca tgc caa gga gac gcc ggc gga cca ctg gtg tgc aag gtg 624
Arg Asp Ser Cys Gln Gly Asp Ala Gly Gly Pro Leu Val Cys Lys Val
195 200 205

aat ggc acc tgg ctg cag gcg ggc gtg gtc agc tgg ggc gag ggc tgt 672
Asn Gly Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys
210 215 220

gcc cag ccc aac cgg cct ggc atc tac acc cgt gtc acc tac tac ttg 720
Ala Gln Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu
225 230 235

gac tgg atc cac cac tat gtc ccc aaa aag ccg tgaagcggcc gccgtcgt 771
Asp Trp Ile His His Tyr Val Pro Lys Lys Pro
240 245

<210> 43
<211> 249
<212> PRT
<213> Homo sapiens

<400> 43

Leu Glu Lys Arg Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp
1 5 10 15

Pro Trp Gln Val Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe
20 25 30

Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His
35 40 45

Cys Val Gly Pro Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu
50 55 60

Arg Glu Gln His Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg
65 70 75 80

34506104.ST25.txt

Ile Ile Val His Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile
85 90 95

Ala Leu Leu Glu Leu Glu Glu Pro Val Asn Val Ser Ser His Val His
100 105 110

Thr Val Thr Leu Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro
115 120 125

Cys Trp Val Thr Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro
130 135 140

Pro Pro Phe Pro Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His
145 150 155 160

Ile Cys Asp Ala Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val
165 170 175

Arg Ile Val Arg Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp
180 185 190

Ser Cys Gln Gly Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly
195 200 205

Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln
210 215 220

Pro Asn Arg Pro Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp
225 230 235 240

Ile His His Tyr Val Pro Lys Lys Pro
245

<210> 44
<211> 735
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(735)
<223>

<400> 44
atc gtc ggg ggt cag gag gcc ccc agg agc aag tgg ccc tgg cag gtg
Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp Pro Trp Gln Val
1 5 10 15

48

34506104.ST25.txt

agc ctg aga gtc cac ggc cca tac tgg atg cac ttc tgc ggg ggc tcc Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser 20 25 30	96
ctc atc cac ccc cag tgg gtg ctg acc gcc gcg gcg tgc gtg gga ccg Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala Ala Cys Val Gly Pro 35 40 45	144
gac gtc aag gat ctg gcc gcc ctc agg gtg caa ctg cgg gag cag cac Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His 50 55 60	192
ctc tac tac cag gac cag ctg ctg ccg gtc agc agg atc atc gtg cac Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His 65 70 75 80	240
cca cag ttc tac acc gcc cag atc gga gcg gac atc gcc ctg ctg gag Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu 85 90 95	288
ctg gag gag ccg gtg aac gtc tcc agc cac gtc cac acg gtc acc ctg Leu Glu Glu Pro Val Asn Val Ser Ser His Val His Thr Val Thr Leu 100 105 110	336
ccc cct gcc tca gag acc ttc ccc ccg ggg atg ccg tgc tgg gtc act Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr 115 120 125	384
ggc tgg ggc gat gtg gac aat gat gag cgc ctc cca ccg cca ttt cct Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro 130 135 140	432
ctg aag cag gtg aag gtc ccc ata atg gaa aac cac att tgt gac gca Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala 145 150 155 160	480
aaa tac cac ctt ggc gcc tac acg gga gac gac gtc cgc atc gtc cgt Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg 165 170 175	528
gac gac atg ctg tgt gcc ggg aac acc ccg agg gac tca tgc cag ggc Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly 180 185 190	576
gac tcc gga ggg ccc ctg gtg tgc aag gtg aat ggc acc tgg ctg cag Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln 195 200 205	624
gcg ggc gtg gtc agc tgg ggc gag ggc tgt gcc cag ccc aac ccg cct Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro 210 215 220	672
ggc atc tac acc cgt gtc acc tac tac ttg gac tgg atc cac cac tat Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr 225 230 235 240	720
gtc ccc aaa aag ccg Val Pro Lys Lys Pro	735

245

<210> 45
 <211> 245
 <212> PRT
 <213> Homo sapiens

<400> 45

Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp Pro Trp Gln Val
 1 5 10 15

Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
 20 25 30

Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala Ala Cys Val Gly Pro
 35 40 45

Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
 50 55 60

Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
 65 70 75 80

Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu
 85 90 95

Leu Glu Glu Pro Val Asn Val Ser Ser His Val His Thr Val Thr Leu
 100 105 110

Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
 115 120 125

Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro
 130 135 140

Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
 145 150 155 160

Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
 165 170 175

Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
 180 185 190

Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln

195

200

205

Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
 210 215 220

Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
 225 230 235 240

Val Pro Lys Lys Pro
 245

<210> 46
 <211> 735
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)..(735)
 <223>

<400> 46
 atc gtc ggg ggt cag gag gcc ccc agg agc aag tgg ccc tgg cag gtg 48
 Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp Pro Trp Gln Val
 1 5 10 15
 agc ctg aga gtc cac ggc cca tac tgg atg cac ttc tgc ggg ggc tcc 96
 Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
 20 25 30
 ctc atc cac ccc cag tgg gtg ctg acc gca gcg cac tgc gtg gga ccg 144
 Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro
 35 40 45
 gac gtc aag gat ctg gcc gcc ctc agg gtg caa ctg cgg gag cag cac 192
 Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
 50 55 60
 ctc tac tac cag gac cag ctg ctg ccg gtc agc agg atc atc gtg cac 240
 Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
 65 70 75 80
 cca cag ttc tac acc gcc cag atc gga gcg gca atc gcc ctg ctg gag 288
 Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Ala Ile Ala Leu Leu Glu
 85 90 95
 ctg gag gag ccg gtg aac gtc tcc agc cac gtc cac acg gtc acc ctg 336
 Leu Glu Glu Pro Val Asn Val Ser Ser His Val His Thr Val Thr Leu
 100 105 110
 ccc cct gcc tca gag acc ttc ccc ccg ggg atg ccg tgc tgg gtc act 384
 Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
 115 120 125

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ggc tgg ggc gat gtg gac aat gat gag cgc ctc cca ccg cca ttt cct 432
 Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro
 130 135 140

ctg aag cag gtg aag gtc ccc ata atg gaa aac cac att tgt gac gca 480
 Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
 145 150 155 160

aaa tac cac ctt ggc gcc tac acg gga gac gac gtc cgc atc gtc cgt 528
 Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
 165 170 175

gac gac atg ctg tgt gcc ggg aac acc cgg agg gac tca tgc cag ggc 576
 Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
 180 185 190

gac tcc gga ggg ccc ctg gtg tgc aag gtg aat ggc acc tgg ctg cag 624
 Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
 195 200 205

gcg ggc gtg gtc agc tgg ggc gag ggc tgt gcc cag ccc aac cgg cct 672
 Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
 210 215 220

ggc atc tac acc cgt gtc acc tac tac ttg gac tgg atc cac cac tat 720
 Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
 225 230 235 240

gtc ccc aaa aag ccg 735
 Val Pro Lys Lys Pro
 245

<210> 47
 <211> 245
 <212> PRT
 <213> Homo sapiens

<400> 47

Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp Pro Trp Gln Val
 1 5 10 15

Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
 20 25 30

Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro
 35 40 45

Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
 50 55 60

Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
 65 70 75 80

34506104.ST25.txt

Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Ala Ile Ala Leu Leu Glu
85 90 95

Leu Glu Glu Pro Val Asn Val Ser Ser His Val His Thr Val Thr Leu
100 105 110

Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
115 120 125

Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Phe Pro
130 135 140

Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
145 150 155 160

Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
165 170 175

Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
180 185 190

Asp Ser Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
195 200 205

Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
210 215 220

Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
225 230 235 240

Val Pro Lys Lys Pro
245

<210> 48
<211> 735
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(735)
<223>

<400> 48
atc gtc ggg ggt cag gag gcc ccc agg agc aag tgg ccc tgg cag gtg
Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp Pro Trp Gln Val

48

34506104.ST25.txt

1	5	10	15	
agc ctg aga gtc cac ggc cca tac tgg atg cac ttc tgc ggg ggc tcc				96
Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser	20	25	30	
ctc atc cac ccc cag tgg gtg ctg acc gca gcg cac tgc gtg gga ccg				144
Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro	35	40	45	
gac gtc aag gat ctg gcc gcc ctc agg gtg caa ctg cgg gag cag cac				192
Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His	50	55	60	
ctc tac tac cag gac cag ctg ctg ccg gtc agc agg atc atc gtg cac				240
Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His	65	70	75	80
cca cag ttc tac acc gcc cag atc gga gcg gac atc gcc ctg ctg gag				288
Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu	85	90	95	
ctg gag gag ccg gtg aac gtc tcc agc cac gtc cac acg gtc acc ctg				336
Leu Glu Glu Pro Val Asn Val Ser Ser His Val His Thr Val Thr Leu	100	105	110	
ccc cct gcc tca gag acc ttc ccc ccg ggg atg ccg tgc tgg gtc act				384
Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr	115	120	125	
ggc tgg ggc gat gtg gac aat gat gag cgc ctc cca ccg cca ttt cct				432
Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro	130	135	140	
ctg aag cag gtg aag gtc ccc ata atg gaa aac cac att tgt gac gca				480
Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala	145	150	155	160
aaa tac cac ctt ggc gcc tac acg gga gac gac gtc cgc atc gtc cgt				528
Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg	165	170	175	
gac gac atg ctg tgt gcc ggg aac acc ccg agg gac tca tgt caa ggc				576
Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly	180	185	190	
gac gcc ggc gga cct ctg gtg tgc aag gtg aat ggc acc tgg ctg cag				624
Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln	195	200	205	
gcg ggc gtg gtc agc tgg ggc gag ggc tgt gcc cag ccc aac ccg cct				672
Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro	210	215	220	
ggc atc tac acc cgt gtc acc tac tac ttg gac tgg atc cac cac tat				720
Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr	225	230	235	240
gtc ccc aaa aag ccg				735

Val Pro Lys Lys Pro
245

<210> 49
<211> 245
<212> PRT
<213> Homo sapiens

<400> 49

Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp Pro Trp Gln Val
1 5 10 15

Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
20 25 30

Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro
35 40 45

Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
50 55 60

Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
65 70 75 80

Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu
85 90 95

Leu Glu Glu Pro Val Asn Val Ser Ser His Val His Thr Val Thr Leu
100 105 110

Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
115 120 125

Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro
130 135 140

Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
145 150 155 160

Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
165 170 175

Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
180 185 190

34506104.ST25.txt

Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
 195 200 205

Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
 210 215 220

Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
 225 230 235 240

Val Pro Lys Lys Pro
 245

<210> 50
 <211> 735
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)..(735)
 <223>

<400> 50
 atc gtc ggg ggt cag gag gcc ccc agg agc aag tgg ccc tgg cag gtg 48
 Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp Pro Trp Gln Val
 1 5 10 15
 agc ctg aga gtc cac ggc cca tac tgg atg cac ttc tgc ggg ggc tcc 96
 Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
 20 25 30
 ctc atc cac ccc cag tgg gtg ctg acc gca gcg cac tgc gtg gga ccg 144
 Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro
 35 40 45
 gac gtc aag gat ctg gcc gcc ctc agg gtg caa ctg cgg gag cag cac 192
 Asp Val Lys Asp Leu Ala Leu Arg Val Gln Leu Arg Glu Gln His
 50 55 60
 ctc tac tac cag gac cag ctg ctg ccg gtc agc agg atc atc gtg cac 240
 Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
 65 70 75 80
 cca cag ttc tac acc gcc cag atc gga gcg gac atc gcc ctg ctg gag 288
 Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu
 85 90 95
 ctg gag gag ccg gtg aac gtc tcc agc cac gtc cac acg gtc acc ctg 336
 Leu Glu Glu Pro Val Asn Val Ser Ser His Val His Thr Val Thr Leu
 100 105 110
 ccc cct gcc tca gag acc ttc ccc ccg ggg atg ccg tgc tgg gtc act 384
 Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
 115 120 125

34506104.ST25.txt

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ggc tgg ggc gat gtg gac aat gat gag cgc ctc cca ccg cca ttt cct      432
Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro
130                      135                      140

ctg aag cag gtg aag gtc ccc ata atg gaa aac cac att tgt gac gca      480
Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
145                      150                      155                      160

aaa tac cac ctt ggc gcc tac acg gga gac gac gtc cgc atc gtc cgt      528
Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
165                      170

gac gac atg ctg tgt gcc ggg aac acc cgg agg gac tca tgc caa gga      576
Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
180                      185                      190

gac gcc ggc gga cca ctg gtg tgc aag gtg aat ggc acc tgg ctg cag      624
Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
195                      200                      205

gcg ggc gtg gtc agc tgg ggc gag ggc tgt gcc cag ccc aac cgg cct      672
Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
210                      215                      220

ggc atc tac acc cgt gtc acc tac tac ttg gac tgg atc cac cac tat      720
Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
225                      230                      235                      240

gtc ccc aaa aag ccg
Val Pro Lys Lys Pro
245

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735

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<210> 51
<211> 245
<212> PRT
<213> Homo sapiens

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<400> 51

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Ile Val Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp Pro Trp Gln Val
1                      5                      10                      15

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Ser Leu Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser
20                      25                      30

```

```

Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro
35                      40                      45

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Asp Val Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His
50                      55                      60

```

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Leu Tyr Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His
65                      70                      75                      80

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Pro Gln Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu
85 90 95

Leu Glu Glu Pro Val Asn Val Ser Ser His Val His Thr Val Thr Leu
100 105 110

Pro Pro Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr
115 120 125

Gly Trp Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro
130 135 140

Leu Lys Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala
145 150 155 160

Lys Tyr His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg
165 170 175

Asp Asp Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly
180 185 190

Asp Ala Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln
195 200 205

Ala Gly Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro
210 215 220

Gly Ile Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr
225 230 235 240

Val Pro Lys Lys Pro
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<223> Beta I and Beta II are N at this residue

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<223> Beta I and Beta II are R at this residue

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<223> Beta I and Beta II are V at this residue

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<223> Beta I and Beta II are HGP at these residues

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Q1 Out
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<223> Beta I and Beta II are A at this residue

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 <223> Beta I and Beta II are Q at this residue

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Met Leu Ser Leu Leu Leu Leu Ala Leu Pro Val Leu Ala Ser Arg Ala
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Tyr Ala Ala Pro Ala Pro Val Gln Ala Leu Gln Gln Ala Gly Ile Val
 20 25 30

Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp Pro Trp Gln Val Ser Leu
 35 40 45

Arg Val Arg Asp Arg Tyr Trp Met His Phe Cys Gly Gly Ser Leu Ile
 50 55 60

His Pro Gln Trp Val Leu Thr Ala Ala His Cys Leu Gly Pro Asp Val
65 70 75 80

Lys Asp Leu Ala Thr Leu Arg Val Gln Leu Arg Glu Gln His Leu Tyr
85 90 95

Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His Pro Gln
100 105 110

Phe Tyr Ile Ile Gln Thr Gly Ala Asp Ile Ala Leu Leu Glu Leu Glu
115 120 125

Glu Pro Val Asn Ile Ser Ser Arg Val His Thr Val Met Leu Pro Pro
130 135 140

Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr Gly Trp
145 150 155 160

Gly Asp Val Asp Asn Asp Glu Pro Leu Pro Pro Pro Phe Pro Leu Lys
165 170 175

Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala Lys Tyr
180 185 190

His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Ile Arg Asp Asp
195 200 205

Met Leu Cys Ala Gly Asn Ser Gln Arg Asp Ser Cys Lys Gly Asp Ser
210 215 220

Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln Ala Gly
225 230 235 240

Val Val Ser Trp Asp Glu Gly Cys Ala Gln Pro Asn Arg Pro Gly Ile
245 250 255

Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr Val Pro
260 265 270

Lys Lys Pro
275